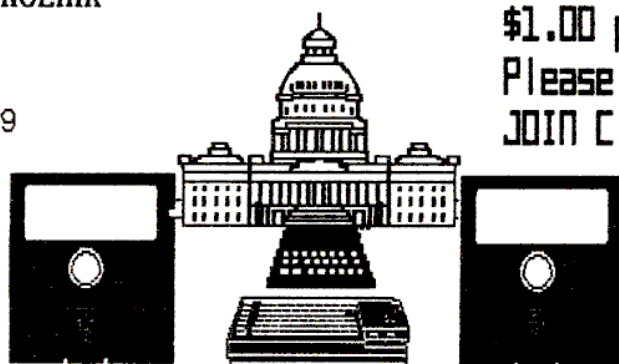


CATS NEWSLETTER

CAPITAL AREA TIMEX SINCLAIR
USERS GROUP
P.O. Box 467
Fairfax Station, VA 22039

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Please support your computer
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VOLUME 6, NUMBER 1



MAY, 1988

Cover your right eye. Now, read this chart....

2X
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PRESIDENTIAL RAMBLINGS

No New Jersey Fest!!

After speaking with Sharp's about the possible NY/NJ TS Fest, it appears as though Zebra Systems (the primary backer), has backed out. They don't seem to have the time to look for a good spot. Zebra suggests that CATS put the Fest on in Baltimore or Washington.

We are expected to pull a Fest out of the blue, as if hotels in this area don't get booked up in advance either? Come on guys. Maybe next year. We too have other things to do. However, we have a good shot at an East Coast Fest (even just a one day event) next Spring if we start planning now.

SPOTLIGHT 1000

This month's featured presentation is an application to show you what a real computer can do. When you get tired of playing games and fooling around, get out your 1000 and do some real work. At this meeting you will see for yourself.

At this Hardware session, we will have the parts for the RGB buffer for the QL. This is a simple but tricky fix. I'll supply an enlarged drawing of what the final part will look like. I finally have proof that the buffer does what it was thought to have done. For the 1000 folks, we have two mods, power and eprom fix, and for those with 2068's similar fixes will be available. Some of these fixes have been previously published in SyncWare News.

FROM THE EDITOR

The other day I received a post card from Joan Kealy. It said:

"If you are losing members,
it's cause

You've Gone too Far Out on a
QLimb!"

I can appreciate Joan's (and many others) concern that we are abandoning the 1000 and 2068 users. This is definitely not true. I try, not always successfully, to include something for these computers in each issue, in fact 14 articles in the last 8 months. I will admit that we print a lot of QL information; however, given the large numbers of QLS in our group, this is simply catering to the needs and interests of a vast section of our active membership. Therein lies the dilemma: How can we retain our 1000 and 2068 members and still satisfy the owners of the newer machines? For my part, I promise to include as many articles as possible. You can help too by writing them. I'd much rather have material from our members rather than clips from other groups. I'm still looking for a volunteer to write a monthly column on the 2068 and/or 1000. Remember, if the newsletter is "too QLish" and you haven't submitted anything, you're part of the problem and really don't have the right to gripe. If you look at the various newsletters, you will see that they, too, are oriented toward the predominant computer in use by their members. For this reason our newsletter will continue to be skewed toward the QL.

Apologies are in order to John Riley and others who supplied the descriptions of programs on the library tape. Last month I attributed them to March Renick, who quickly set me straight, when he saw the last issue.

In this issue, check out the 2068 programs by Ed Weppler and H.F. Schaaf. John Riley just sent the

Library Guide for Volumes 10 and 11 so we are printing it instead of the old Guide. We will continue that next month. Pieter van Dijk has a neat menu program. For the 1000 owners, Tom has given us a hardware mod. Finally, we have the only known comprehensive listing of mods for the entire Sinclair line, courtesy of Phil Russo.

Finally, please see the Classified Ads. Some dynamite deals are on the market, so don't let them slip away.

MAY MEETING AGENDA

11:00 Hardware Workshop
1:00 to 2:00 Lunch
2:00 to 2:30 General
Meeting
2:30 to 3:30 Office Use of
the ZX81: Dr. Sheingorn
3:00 to 4:30 Open discussion
4:30 Adjourn

NEWSLETTER SUBMISSIONS

Submissions for the newsletter can be in hard copy, with columns 3 1/2 inches wide or, preferably, magnetic media. For the QL, microdrive cartridge, 5 1/4" DS/DD or Quad density disks, or 3 1/2" disks. For the ZX81, TS1000, or 2068, cassettes only, with titles on the box.

Send material to:
Editor, CATS Newsletter
Box 467
Fairfax Station, VA 22039

CATS 2 MAY

POT POURRI

News Around the Beltway

SUMMER WILL BE FESTIVE TIME IN SINCLAIR LAND

August will be a busy month for anyone that wants to say they've been to every major Sinclair computerfest, as there will be major shows in Portland, Oregon and Cleveland, Ohio.

The Portland show has been named the Great NW TS Mini-Fair and will be held on Saturday, August 6 and Sunday, August 7. Hours both days are 9AM to 6PM. The show location is the Cosmopolitan Hotel, 1030 N.E. Union, Portland, OR 97232. For reservations call (503) 235-8433 and tell them you are attending the Timex show. The hotel is conveniently located as it is 15 minutes from the airport and only 2 blocks off of Interstate 5. For those not yet bitten by the Sinclair bug, the organizers have a Saturday tour to the Columbia River Gorge and a Sunday bus tour to Washington Park (Portland Zoo, etc). For more information call (503) 655-7484 or look in the CATS binders at the next meeting.

The Greater Cleveland Sinclair User's Group will host "The Timex-Sinclair-Amstrad Computer Users 1988 Midwest Regional Conference" on August 26 and 27. The theme for this event is: "Users-learning from other Users". The meeting location is at the Beck Center for the Arts, a cultural arts complex in Lakewood, a western suburb of Cleveland. This is not a hotel site so, it appears, that attendees will have to fend for themselves for lodging and transportation. For further information write the Cleveland group at 2192 Glenbury Ave, Lakewood, OH 44107.

From the looks of the title, the Cleveland group must have embraced MS-DOS, as well as forgiven Amstrad for sinking the Sinclair ship.

OFFICE USE OF THE ZX81 by George Reg

Some background info on our May meeting

A Rockville, Maryland, Ophthalmologist, Dr. Larry Sheingorn has been using his ZX81 Sinclair computer in his office to keep tabs of his business. Larry will be at our May 14 meeting, hopefully with his secretary Laura, to tell us what he has done in putting this Sinclair unit to work. It was an article in a recent "Time Design Magazine" magazine that brought our attention to the talent we have in our own backyard, and so we contacted him to put this show on. He has willingly volunteered. So, lets give him a good turnout.

Using BASIC, Larry has developed a software program called "DAYSHEET" to keep a running total of patients that are served in one day, and what care was rendered, as well as the charges made. The Day-sheet is totalled and balanced at the end of each day, and greatly helps to simplify his bookkeeping.

The program requires a 64K Ram-pack and a full size printer. The program is set up to handle a patient load of 25, but could be re-defined for more accounts. Built into the program are ICD and CPT medical office codes, to represent medical procedures that are performed. For example "CE" means "Complete Exam" and adds the correct charge to the patients record.

Dr. Sheingorn's three secretaries are all trained to use the program, and the ZX81, which runs 24 hours a day with no problems. None of the typical anti-heat and Rampack crash modifications have been performed, except a little more compound was added to the heat sink.

The program was set up to drive a Seikosha (Gorilla Banana) printer, but high volume use wore it out and

Continued on Page 10

QL on the QT

by Vernon Smith

The long awaited Flashback finally arrived and I definitely think it was worth the wait. For those of you that need an easier to use data base management program than Archive, this should be right up your alley. Written by Peter Jeffries, the author of Spellbound, it too runs in the background and is called up using Alt-Backslash and killed with Escape. Have you ever wanted to add a field to an Archive file? You know what a job it is. Not with Flashback. Fields can be inserted at any time and, unlike Archive, the field will automatically expand to fit the data. Flashback also has the capability for implementing a sub-record structure, so very sophisticated data base displays can be constructed. I dreaded using Archive for fear that a crash or some other glitch, before I closed a file, would prevent me from reopening it. With Flashback I no longer have that worry. Finally there is an Import program to convert your existing dbf files to Flashback files which have a dba extension. Though not extensive, the documentation is well written and at a level that everyone ought to be able to understand. The docs also hint at several programs that will round out the Flashback suite, a report generator for more selective data display and a Superbasic interface to allow Flashback to be driven within Superbasic as Archive is with its programming language.

If you decide not to buy Flashback but still need a program to expand your Archive files, Refile may be what you need. This is a *SHAREWARE* program produced by Bill Cable of Wood and Wind Software. What's shareware? Well the program is freely circulated and the author asks that if you like it you send him a donation. Anyone wishing the Refile program should send me a

microdrive cartridge or disk and I will copy Refile to it.

Waiting seems to be the name of the game in QL land since I'm looking forward to seeing the new Sandy Megaboard, which combines features of the Trump Card (1 MB of RAM) and the SuperQ Board (mouse port, floppy disk I/F, and parallel printer port) with a *hard disk* interface and some other goodies, like Speedscreen and a battery-backed real time clock. If all that doesn't make your mouth water, you're a prime candidate for a heart transplant. I certainly hope it arrives before the pound goes too much higher.

Several issues ago, Tom advised us that memory chips (256K and 1MB types) were going through the roof. At the time that was true; however, prices may have peaked and we will see lower prices for some chips in the future. This is good news for those in the market for replacement chips. For those looking to buy new Trump Cards or 512K expansion boards, the increase in the value of the pound will be the deciding factor since chip scarcity was a US problem. Look for these units to go up, especially the Trump Card, which is an extremely popular add-on.

If you haven't done so already, buy a copy of Chuck Platt's Paste Art. Even if you're not into Desktop Publishing, it'll come in handy for graphics programs. Chuck has indicated that, if the first disk sells well, number 2 will be on its way.

Finally,--and I can hear the collective sigh of relief--isn't there someone out there who would like to write this feature every other month? You don't need experience or to be technically oriented, just look at me. What is needed is an interest in the QL and a desire to contribute to the user group. The subject matter is up to you, grind an axe or review a program. Let me know.

CATS 4 DAY

the PLOTTER: Tips and programs for the plotter user by Pieter van Dijk PROGRAM 'MENU'

This set of procedures is a general version of a menu bar system that I use in some of my programs. It might be of interest to others for use in programs that require keyboard option selection.

When run the program displays a menu bar on the screen with one highlighted item. The left and right cursor keys move the item. The Enter key executes the menu choice.

The first menu is used here to set a flag for printer/screen output, to rerun or to stop the program. If the printer/screen option is selected the program moves to the first submenu which contains two procedure selections, a submenu or return to the previous menu. The submenu contains further procedures and also a return to the previous menu. Each time a procedure option is entered, the procedure is executed and the menu bar reappears upon completion of the procedure.

The best way to see how the program works is to run it and look what happens. The procedure used here is a one line text output to the screen, but it can be replaced by any other type of procedure.

THE PROGRAM

c: channel for menu bar
l: length of menu text block
menu_load: sets up the text in the menu bars, can be modified for other applications.
main_menu: printer flag and RUN or STOP. The action can be modified to suit other requirements. The menu jumps to menu_1 after flag selection.
menu_1: selects procedures 1 or 2, submenu 2, or returns. The actions can be modified to suit other requirements. Unless the submenu is selected, the program returns to the main

menu upon completion of the procedures.

menu_2: selects procedures 3P, 3S, 4 or 5 or returns. Upon completion of the procedure the program returns to the submenu.

menu (A): This procedure does the screen printing and keeps track of highlight position through the variable TEMP. The command KEYROW is used for quick reaction to a keypress (see QL manual.).

prc : Procedure used to demonstrate the procedure execution. It is not a part of the menu program.

When experimenting with this program you will find out that it can be modified in many respects to fit specific requirements. GOOD LUCK.

```
100 C=0:L=10:MENU_LOAD:MAIN_MENU
110 DEFine PROCedure MAIN_MENU
120 LOCAL LOOP:REPEAT LOOP
130 MENU 0:SElect ON TEMP
140 =0:FLAG=0:EXIT LOOP
150 =1:FLAG=1:EXIT LOOP
160 =2:CLR:RUN:=3:STOP
170 END SElect
180 END REPEAT LOOP:MENU_1
190 END DEFine MAIN_MENU
200 DEFine PROCedure MENU_1
210 LOCAL LOOP:REPEAT LOOP
220 MENU 1:SElect ON TEMP
230 =0:PRC 1:=1:PRC 2
240 =2:MENU_2:=3:CLS:EXIT LOOP
250 END SElect
260 END REPEAT LOOP:MAIN_MENU
270 END DEFine MENU_1
280 DEFine PROCedure MENU_2
290 LOCAL LOOP:REPEAT LOOP
300 MENU 2:SElect ON TEMP
310 =0:IF FLAG:PRC "3P":ELSE :PRC "3S":END IF
320 =1:PRC 4:=2:PRC 5
330 =3:CLS:EXIT LOOP
340 END SElect
350 END REPEAT LOOP:MENU_1
360 END DEFine MENU_2
370 DEFine PROCedure MENU(A)
380 LOCAL B,D,LOOP
390 CLS#C:INK#C,7:STRIP#C,0
400 FOR B=3 TO 0 STEP -1
410 IF B=0:INK#C,0:STRIP#C,7:END IF
420 AT#C,0,10+L*B:PRINT#C,OPT$(A,B)
```

Continued on Page 10

focus on: **TIMEX**sinclair 1000 and 2068

FRACTIONS

It is interesting to see the computer work in true fractions instead of converting everything to decimal numbers.

This program first displays a blank equation:

$0/0 \div 0/0 = ?$

Each unknown flashes, in turn, for entry of a number or operator.

Lines 55 to 80 provide the necessary cross-multiplication. The result is available as X and Y in line 85, but the numbers may be large.

Finding the least-common-denominator is the real programming problem. To test all the possibilities one by one is slow, so lines 90 to 125 limit the search to submultiples of X.

Eventually this may become counter-productive; if further search is needed it reverts to one-by-one testing for the rest of the way. The result is displayed as:

$203/300 + 103/200 = 1\ 23/120$

I have worked out an M/C program which speeds it up further for large numbers. If anyone is interested I will be glad to send a print-out.

H.E. Weppeler

```

10 REM *****FRACTIONS
15 DIM Z(5): LET Q$=""
20 FOR N=1 TO 6
25 PRINT AT 24-PEEK 23689,0; F
LASH (N=1);Z(1); FLASH 0;"/"; FL
ASH (N=2);Z(2); FLASH 0;" "; FLA
SH (N=3);Q$; FLASH 0;" "; FLASH
(N=4);Z(4); FLASH 0;"/"; FLASH (
N=5);Z(5); FLASH 0;" = "; FLASH
(N=6);"?"; FLASH 0;CHR$ 8;
30 IF N=6 THEN GO TO 50
35 IF N=3 THEN INPUT Q$: LET Z
(3)=CODE Q$: GO TO (50-15*(Q$>"
0"))
40 INPUT Q: LET Z(N)=SGN Q:INT
ABS Q: GO TO (50-10*(Z(N)=0))
50 NEXT N
55 LET A=Z(1)*Z(5)
60 LET B=Z(2)*Z(4)
65 LET C=Z(2)*Z(5)
70 LET D=Z(1)*Z(4)
75 LET X=A+B*(Q$="+")-B*(Q$="-
")+(D-A)*(Q$="*")
80 LET Y=C+(B-C)*(Z(3)=47)
85 LET X=SGN Y*X: LET Y=ABS Y
90 REM *****LEAST COMMON DENOM.

```

```

95 LET A$=(- AND X<0)
100 LET X=ABS X: LET A$=A$+(STR
$ INT (X/Y)+ " " AND X>=Y)+( "0" A
ND X=0): LET X=X-INT (X/Y)*Y
110 FOR J=1 TO X: LET Z=INT (X/
J)
115 IF Z=INT (X/(J+1)) THEN FOR
J=Z TO 1 STEP -1: LET Z=J
120 IF INT (X/Z)=X/Z AND INT (Y
/Z)=Y/Z THEN GO TO 130
125 NEXT J
130 LET A$=A$+(STR$ (X/Z)+"/"+S
TR$ (Y/Z) AND X)
135 PRINT A$: STOP : GO TO 10

```

AUTOMATING THE DATA LINE

Some programs in Basic call in M/C routines for repetitive or special functions. In such cases it is often convenient to create a joint record.

The Basic program can include a decimal loader, as shown in lines 9955 to 9975, below. The details of the M/C routine are contained in the Data lines.

This permits all the details to be stored in the Basic program, on tape or on paper, without treating the code portion separately.

In writing such a Basic program, the Data lines may be formed automatically. After the M/C portion has been developed and put in memory with an assembler or the like, the DATA LINE program is run. The desired Data line number is specified, along with the limits in memory of the M/C bytes, and the numbers are recorded automatically.

The data may be spread over several program lines by just running DATA LINE several times for consecutive portions of the memory.

This approach may be used for any type of program line or instruction. Just have the desired instruction built up in string R\$, like you would enter it from the keyboard, and then RANDOMIZE USR 65300.

The M/C program is not location-sensitive, so it may be stored any place in memory. Also the string need not be R\$, for any letter may be used; however, then the last number in line

Automating the Data Line-Continued from Page 6

9965 must be changed to the code for the upper-case version of that letter; 82 is the code for R.

H.E. Ueppler

```
9900 REM ***** DATA LINE
9905 IF PEEK 65300<>33 OR PEEK 6
5341<>201 THEN GO SUB 9955
9910 INPUT "DATA LINE ";LL
9915 INPUT "M/C START ";S5
9920 INPUT "M/C END ";EE
9925 LET R$=STR$ LL+CHR$ 228
9930 FOR N=SS TO EE
9935 LET R$=R$+STR$ PEEK N+","
9940 NEXT N: LET R$(LEN R$)=" "
9945 RANDOMIZE USR 65300
9950 STOP
```

```
9955 RESTORE 9965
9960 FOR N=65300 TO 65341: READ
R: POKE N,R: NEXT N: RETURN
9965 DATA 33,19,0,9,229,229,42,9
7,92,43,43,205,99,19,14,82
9970 DATA 205,187,44,35,78,35,70
,35,229,197,42,89,92,229
9975 DATA 205,187,18,209,193,225
,237,176,205,58,14,201
9980 STOP
```

RANDOM NUMBERS, ETC.

A few months ago Duane Parker and I had been talking about random numbers. I told him about a program that I had done which gives the seed of any random number, that is to say it works in reverse of the random number generator. Others may also be interested, so here it is.. While in 2068 format, it's easy to modify for the ZX-81 and QL.

```
10 REM "seed<-->RND"
20 LET a=2+16
25 LET b=a+1
30 LET c=52
40 LET d=74
50 LET e=d+1
60 LET f=.5
70 PRINT "You enter the value
you want to come up as the next
random #."
80 PRINT "If you enter a numb
er between Zero and Unity (0
to 1) Then it will be con
verted to an integer multiple of
65535."
90 PRINT "You may enter an in
teger betweenZero and 65535 and
the decimal value (0 to 1) will
be shown"
100 INPUT "Random number between
n 0 & 65535 that you want to in
ow seed of ";r
102 IF r<0 THEN PRINT "POSITIVE
VALUES ONLY !" "Press ENTER to
restart": PAUSE 0: RUN
103 IF r>1 AND (r-INT r)<>0 the
N PRINT "INTEGERS ONLY !" "Pres
s ENTER to restart": PAUSE 0: RU
N
105 IF r<1 THEN LET r=INT (f+r+
```

```
107 IF r=74 THEN FLASH 1: PRINT
"That's a tough one ! The seed
of ZERO will NOT be predictable
!!": PRINT "RANDOMIZE 74 gives
the longest nonrepeating run of
random numbers)": FLASH 0
: PRINT
110 PRINT "For RND = ";r;" ( ";
r/a;" )"
120 LET x=r-d
125 LET x=INT ((x-((INT (x/e))+
e))+f)
130 LET x=x+c
140 LET x=INT ((x-((INT (x/e))+
e))+f)
150 LET seed=INT (((x+b+r-d)/e)
+f)
160 PRINT "RANDOMIZE ";seed;" a
nd then RND"
200 REM rnd from seed
205 PRINT "Given a seed this w
ill find the Resulting RND the h
ard way."
210 INPUT "seed ? ";seed
220 PRINT seed,
230 LET random = (seed+75+74)
250 IF random<b THEN GO TO 260
255 LET random=random-b: GO TO
250
260 PRINT random
270 PRINT "Now the easy way !"
280 RANDOMIZE seed
290 PRINT seed, RND+a
295 PRINT "Press ENTER to RUN
again"
300 PAUSE 0: RUN
```

I've also done a couple of FORTH screens that will do this seed<-->rnd conversion and generation if anyone cares. Now what I'd like to see is an explanation of just how the QL does its random numbers !

H. L. Schaaf

STACKING THE CALCULATOR

In writing programs in Machine Code it is sometimes necessary to bring in data from a BASIC program or from direct input.

A simple way is to go to M/C with RANDOMIZE X+USR 65000. That puts X on the calculator stack, from which it may be drawn and used within the M/C program. X may be a variable or numerals.

That approach may be expanded to stack several numbers. Just include "X+(...)" for each added number. For example:

RANDOMIZE X3+(X2+(X1+USR 65000)) will put three numbers on the stack, with X1 "on top".

At the end of the M/C program add a line:"EF A0....38", with one A0 for each + sign in the entry. The A0's put 0's on the stack to replace the numbers originally stacked and then used in the M/C program.

H.E. Ueppler

The 2068 Library, Volumes 10 and 11

Annotated by John Riley

I'll bet you thought John Riley had disappeared into a black hole in Sinclairland. Not so. He's been fiddling with his Larken system and putting the finishing touches on Volumes 10 and 11 of the CATS library. Listed below are the programs in those volumes and John's short summary of each.

VOLUME 10 EDUCATION AND DEMOS

FRENCH - a tutorial for students of French.

QUIZZ MASTER - an adaptable Q/A format test, currently filled with general knowledge questions.

Q&A TEST GENERATOR - allows you to easily form your own Q&A tests.

READ & SPELL - correct spelling errors in sample sentences.

MULTIDRILL - tests knowledge of the multiplication tables. Correct answers are rewarded with a video game.

SPELLING - choose the correct spelling of a given word.
OHM'S LAW - learn and use this "law" of electricity.

INSIDE SPECTRUM - a graphic "guided tour" of the insides of a Spectrum, the kissing cousin of the 2068.

GENETICS - a simulation of Mendel's laws of inheritance.

EQUATIONS - solve problems for x and y.

SPELLBUG - unscramble the words. Uses joystick in the right port, has very nice graphics!

WORDS - a primitive AI sentence generator.

ELIZA - an implementation of the famous "computer psychologist" AI program.

LIFE - a simulation of the development of a life form's population, under the constraints of limits that you set.

BEATLES - a demonstration of the musical capabilities of the 2068 onboard sound chip, using all three channels with a rather nice rendition of "And I Love Her".

MOZART - highbrow compu-music with Piano Sonata in C Major.

PARAKEET - a bizzare little program that imitates several parakeets talking to one another.

PIANO - creates a one-octave keyboard that you can play on.

CHOPIN - another nice compu-music version of a classical piece.

VOLUME 11 GRAPHICS AND CHARACTER SETS

BIG LETTERS - a thick, bold character set.

ALTERNATE CHARS - a modernistic character set. List program for instructions.

PRINT - a utility for generating multiple sizes of letters.

BOLD - a striking and readable character set.

CRAZYPRINT - a wild and "bouncing" character set.

3D WORDS - a program that makes titles using letters with a girder-like appearance.

OLD ENGLISH - a very nice program
Concluded on Page 9

that generates large Old English style characters.

NEW CHARACTERS - another alternate character set.

COWDEN - somehow this letter to a tape-based British Spectrum magazine managed to float over to the States. However it came to be here, it contains two nice character sets and a lot of interesting screen techniques that can be "mined" out of it.

TITLESHOOT - an interesting way of "blasting" letters onto the screen from the bottom left-hand corner.

BACKGROUND - creates a number of options for screen backgrounds that you can use in designing title screens for your programs.

GOBLET - A 2068 version of the program that first appeared in the Spectrum-only Volume 4 of this library. You enter a number of co-ordinates to create a "slice" of a 3-D object. The computer then draws that object from five different angles, then pages them together to animate them. You must use the code "555" to signal the machine that you are through entering points and start the animation procedure.

GREETINGS - a good "electronic bulletin board" program to use at meetings, displays, etc. to catch the eye and convey information. ALSO contains a sub-program "Spirographics".

GRAPHICS - a dazzling display of screen graphics on the 2068. After watching it awhile, break and list the program and be further amazed at how short it is!

SOLID BANNER - prints large character letters on a 2040 printer.

ART - more simple but beautiful

graphic screens.

COLORSLASH - schizophrenic screen graphics. Looks like something Jack the Ripper would think up.

CLOVER - a demo of the possibilities of changing the stippling on an existing image to create an interesting new one.

128 COLORS - the complete 2068 color palette.

NETWORK - lacy and modernistic screen designs.

SANTA - an electronic Christmas card.

TWIRLER - an animated 3-D graphic.

UDG DEMO - a "possibilities" program from the L.I.S.T. group.

NEW SCRIPT - one more alternate character set for your 2068.

Improving the TV Picture

Perhaps you may have already had the pleasure of expanding your 100 in many directions. You may notice that the TV picture has a lot of crap floating around on the screen. When tissue paper fails to clean up the matter, unbolt the damper from the top of your 1000 and clamp it firmly down on top of the TV. There, now the picture is a nice clean white.

Unfortunately, you crashed because you wobbled your computer. Replace the big iron damper with a 47 pico-farad mylar capacitor directly across the input of your antenna (on the TV itself where the computer hooks in). That should improve those moire patterns if it does not eliminate them.

Next month we will continue coverage of your 1000 computer. By the way, a big iron damper is a sensational place to discharge your finger tips prior to wobbling your computer!!

Office Use of the ZX81-Continued from Page 3

was replaced by an Epson. The printer should not be on the same table as the computer as there is too much vibration, according to Sheingorn.

A Memotech keyboard replaces the ZX81's membrane keyboard, a Memotech Centronics printer interface is used, along with a Byte Back 64K Ram module. Basically the ZX81 is used just as a circuit board.

Sheingorn considers Timex Sinclair BASIC as fairly straightforward and surprisingly powerful, for example in the way it dimensions arrays, and only the ZX81 memory is limiting.

the Plotter-Continued from Page 5

```

430 END FOR B
440 REPEAT LOOP
450 PAUSE:D=KEYROW(1)
460 IF D=1:EXIT LOOP:END IF
470 IF D=2 OR D=16
480 STRIP#C,0:INK#C,7
490 AT#C,0,10+L*B:PRINT#C,OPT$(A,B)
500 IF D=2:B=B-1:END IF

510 IF D=16:B=B+1:END IF
520 IF B<0:B=3:END IF
530 IF B>3:B=0:END IF
540 STRIP#C,7:INK#C,0
550 AT#C,0,10+L*B:PRINT#C,OPT$(A,B)
560 END IF
570 END REPEAT LOOP
580 TEMP=B:PAPER#C,0:INK#C,7:CLS#C
590 END DEFINE MENU
600 DEFINE PROCEDURE MENU_LOAD
610 DIM OPT$(3,4,L-1):RESTORE 660
620 FOR A=0 TO 2
630 FOR B=0 TO 3:READ OPT$(A,B):END
FOR B
640 END FOR A
650 END DEFINE MENU_LOAD
660 DATA ' SCREEN ' , ' PRINTER ' , ' S
TART ' , ' STOP
670 DATA ' PROC 1 ' , ' PROC 2 ' , ' ME
NU 2 ' , ' RETURN
680 DATA ' PROC 3 ' , ' PROC 4 ' , ' PR
OC 5 ' , ' RETURN
690 DEFINE PROCEDURE PRC (A$)
700 CLS:PRINT 'PROCEDURE '&A$
710 END DEFINE PRC

```

Hardware Mods Review by Phil Russo Concluded from the April issue

TO DATE, FOR THE QL, WE HAVE:

1. WD40 KEYBOARDS
2. POWER SUPPLY: CAPS/RESISTORS
3. POWER SUPPLY: SURGE SUPPRESSORS.
4. CLOCK BOARD
5. EPROM BOARD (THIS IS THE ONE THAT ALSO CUTS THE HEAT DOWN)
6. RGB BOARD
7. HOW ABOUT A GENERAL REPAIR GROUP?

TO DATE, FOR THE 2068

WE HAVE:

1. LOAD AND SAVE MOD
2. 5 VOLT REG. (TO CLEAR UP SCREEN DISPLAY).
3. RGB OUTPUT MOD
4. EPROM MOD, (SPECTRUM).
5. IMPROVEMENT OF THE OPERATING SYSTEM.

TO DATE, FOR THE 1000

WE HAVE:

1. SAVE AND LOAD MOD
2. IMPROVED OPERATING SYSTEM
3. KEYBOARD UPGRADE
4. VIDEO OUTPUT.

Well, we can bi--oops, complain all we want so long as we're willing to help out. So with tongue in cheek and a smile on my face, I'll make the following commitment.

If you call me to let me know which project you would like to work on, I will, as best I can, find someone who knows what to do, and how to do it, and ask him to oversee one corner of the room for that particular project, on that particular Saturday. If we get too many for a good session at the library, we can schedule the session at someone's home.

Anyway, it's just a thought. I know that I, for one, would like to use my QL to it's fullest extent.

By the way, my number is 301 441-1946. I have an answering machine, so just leave a message--oops, just bit my tongue.

CLASSIFIED ADS

FOR SALE Silver Reed EX34 typewriter/
daisy wheel printer \$160
(Has standard parallel port
and uses Quill driver)
Price includes 2 extra
print wheels and 6 ribbons

ICE+Mouse
with Ice and Artice
Originally £100, now \$75
The best mouse/icon system

8 keyboard matrices \$17

2X8001 chips \$17.50

Prices are PLUS shipping
Vernon Smith (703) 978-1835
or via CATS P.O. box

REFIELD

Easily change fields of your Archive data
base with this menu driven program. \$8.00
I also have many special Archive procedures
for small businesses.

Bill Cable

Wood and Wind Computing
RR 2 Box 92, Cornish, NH 03745
(603) 675 2218

SCLD CHIPS ANYONE?

While at the Timex Sinclair "do" in
Orlando I picked up some news worth
sharing...someone has both new and used
SCLD chips! Contact him directly for
particulars:

ERIC JOHNSON
249 N. HARDEN AVE.
ORANGE CITY, FL 32763
(904) 775 4935

Ruth Feigley

ATTENTION: TS1000/1500 COMPUTER USERS

I've recently assumed the responsi-
bility of C.A.T.S. 1000 program tape
librarian. Please, don't misunderstand,
this in no way implies that I am a program
guru. Actually, the opposite is true.
Since most of the '10-1500' knowledgeable
people have moved on to the QL and other
more sophisticated computers and, since I
have chosen to concentrate on the 10-1500
solely that leaves me as the 'keeper of the
tapes'.

Included in the accompanying list are
both my own collection and that of
C.A.T.S. I am also trying to compile a
listing of brief descriptions, along with
helpful notes and hints, of the Club tapes
which I will have placed into the
Newsletter.

At this moment I can only assume that
there are those of you who wish to
continue with the TS 10-1500 either by
itself or in combination with other
computer equipment. Before I get myself
involved in some incredible but useless
project I would like to know for certain
that there are others of you that are
still interested. Whether or not I am
alone I will continue but, on a smaller
scale for myself. As far as getting the
mechanics of this service into operation
that's a minor detail. Please drop me a
line [literally] so I will know whether
I should 'Go Big'. Should I get no
response, I'll maintain this idea at a
personal level.

Send me a card...

Ted Osheoff
P.O. Box 392
College Park, Md.
20740-0392

C.A.T.S. LIBRARY

SIDE A

#201 *
Money Grabber[2,16]
Bar Chart[3,36]
Random Walks[1,32]
Stat Tests[2,65]

#202 *
Grabos[1,46]
Cryptopad[1,37]
Shopper[5,59]

#203 *
Duck[1,69]
Driver[1,40]
Defuser[1,45]
Spider[3,38]
P of 2[1,47]
Towers[1,69]
Control[1,44]

#204 *
Flatman[1,27]
Billard[1,28]
Smaug[6,28]

#205 *
Bomb[1,49]
Mine[1,39]
Alzan[4,21]
Star[2,67]
Breakout[1,36]
Mem Ds[1,40]

#206 *
Peril[6,69]
Shift Rotate DM[3,26]
TIC[2,62]

SIDE B

Stock Exchange[3,15]
Vigenere Cipher[1,58]
Nav Fix[4,38]

Golf Course[6,61]
Quack[1,56]
Mtgs. Loan[1,21]

Smaugs[3,51]
Maze[1,10]
B O B[1,10]
Calendar[1,67]
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Poly[1,48]
Ham[1,59]
Torps[1,43]
Orbt[1,48]
Space[1,53]
Math[1,33]
Prism[1,43]
Cave[1,48]
Race[1,43]

Puzzler[1,37]
Four[1,52]
Bu[3,17]
Flip[1,29]
Tape Lib[1,57]

AMARI[2,66]
Calendar[4,41]
TIC[2,62]

CATS II DAY

Listing will be concluded next month

20% 005: (505) 522-7081 F100 net
 15, node 6, East Coast dial (703)
 547-4815 F100 net 18, node 9.
 TimeX SIG on CompuServe: Wednes-
 day night, 10 P.M. Eastern time
 (60 CLUB).

Networks

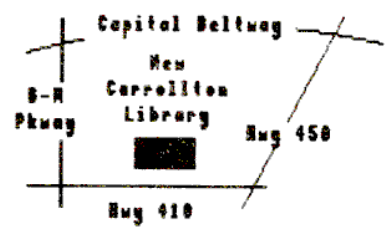
Memberships cost \$18 per year,
 are good for 12 months, and in-
 clude all privileges (access to
 libraries, group bugs, etc.).
 A newsletter subscription only
 is available for \$12 per year.

Newsletter

Monthly meetings are held from
 11 AM to 4:30 PM, on the second
 Saturday of each month, at the
 New Carrollton Public Library.

Meetings

CATS Newsletter
 P.O. Box 467
 Fairfax Station, VA 22039



The next meeting of CATS will be held on:
 Saturday, May 14, 1988 11:00 AM Hardware Workshop
 2:00 PM General Meeting

At: New Carrollton Public Library
 7414 Riverdale Road (Hwy 410), New Carrollton, MD

IF YOU ARE NOT A MEMBER OF CATS, THIS IS THE ONLY ISSUE YOU WILL RECEIVE

DUES: \$18 per year, per family

CATS maintains a gratis exchange
 of newsletters with approximately
 30 users groups across the U.S.
 Clubs not sending a net to us for
 six months are automatically
 taken off the list.

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- 1st Vice President: Hank Dickson
- 2nd Vice President: George Ray
- Secretary: Mike Warmick
- Treasurer: Ruth Fagley
- Members at Large: Mark Fisher, Bill Barnhart, Bob Curnutt, Vernon Smith
- Editor & contact person: (703) 978-1835

Executive Board

is a not-for-profit group devoted
 to serving the interests of those
 who own, use, or are interested
 in the TimeX/Sinclair family of
 computers.

Users Group

The Capital Area TimeX Sinclair

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